

SEQUENCE LISTING

<110> Lees, Ann M.
 Lees, Robert S.
 Law, Simon W.
 Arjona, Anibal A.

<120> NOVEL LOW DENSITY LIPOPROTEIN BINDING
 PROTEINS AND THEIR USE IN DIAGNOSING AND TREATING
 ATHEROSCLEROSIS

<130> 10797-004001

<140> US 09/616,289

<141> 2000-07-14

<150> US 09/517,849

<151> 2000-03-02

<150> US 08/979,608

<151> 1997-11-26

<150> US 60/031,930

<151> 1996-11-27

<150> US 60/048,547

<151> 1997-06-03

<160> 53

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 151

<212> PRT

<213> Oryctolagus cuniculus

<400> 1

Met	Ser	Lys	Asn	Thr	Val	Ser	Ser	Ala	Arg	Phe	Arg	Lys	Val	Asp	Val
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Asp	Glu	Tyr	Asp	Glu	Asn	Lys	Phe	Val	Asp	Glu	Glu	Asp	Gly	Gly	Asp
		20						25					30		
Gly	Gln	Ala	Gly	Pro	Asp	Glu	Gly	Glu	Val	Asp	Ser	Cys	Leu	Arg	Gln
		35					40					45			
Gly	Asn	Met	Thr	Ala	Ala	Leu	Gln	Ala	Ala	Leu	Lys	Asn	Pro	Pro	Ile
	50					55					60				
Asn	Thr	Arg	Ser	Gln	Ala	Val	Lys	Asp	Arg	Ala	Gly	Ser	Ile	Val	Leu
65				70					75					80	
Lys	Val	Leu	Ile	Ser	Phe	Lys	Ala	Gly	Asp	Ile	Glu	Lys	Ala	Val	Gln
			85					90					95		
Ser	Leu	Asp	Arg	Asn	Gly	Val	Asp	Leu	Leu	Met	Lys	Tyr	Ile	Tyr	Lys
		100					105					110			
Gly	Phe	Glu	Ser	Pro	Ser	Asp	Asn	Ser	Ser	Ala	Val	Leu	Leu	Gln	Trp
		115				120					125				
His	Glu	Lys	Ala	Leu	Ala	Ala	Gly	Gly	Val	Gly	Ser	Ile	Val	Arg	Val
		130				135					140				

Leu Thr Ala Arg Lys Thr Val
145 150

<210> 2
<211> 317
<212> PRT
<213> *Oryctolagus cuniculus*

<220>
<221> VARIANT
<222> (1)...(317)
<223> Xaa = Any Amino Acid

<400> 2
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1 5 10 15
Arg Ala Gly Gly Pro Ala Arg Pro Val Ser Leu Arg Glu Val Val Arg
20 25 30
Tyr Leu Gly Gly Ser Ser Gly Ala Gly Gly Arg Leu Thr Arg Gly Arg
35 40 45
Val Gln Gly Leu Leu Glu Glu Glu Ala Ala Ala Arg Gly Arg Leu Glu
50 55 60
Arg Thr Arg Leu Gly Ala Leu Ala Leu Pro Arg Gly Asp Arg Pro Gly
65 70 75 80
Arg Ala Pro Pro Ala Ala Ser Ala Arg Ala Ala Arg Asn Lys Arg Ala
85 90 95
Gly Glu Glu Arg Val Leu Glu Lys Glu Glu Glu Glu Glu Glu Glu
100 105 110
Asp Asp Glu Asp Asp Asp Asp Val Val Ser Glu Gly Ser Glu Val
115 120 125
Pro Glu Ser Asp Arg Pro Ala Gly Ala Gln His His Gln Leu Asn Gly
130 135 140
Gly Glu Arg Gly Pro Gln Thr Ala Lys Glu Arg Ala Lys Glu Trp Ser
145 150 155 160
Leu Cys Gly Pro His Pro Gly Gln Glu Glu Gly Arg Gly Pro Ala Ala
165 170 175
Gly Ser Gly Thr Arg Gln Val Phe Ser Met Ala Ala Leu Ser Lys Glu
180 185 190
Gly Gly Ser Ala Ser Ser Thr Thr Gly Pro Asp Ser Pro Ser Pro Val
195 200 205
Pro Leu Pro Pro Gly Lys Pro Ala Leu Pro Gly Ala Asp Gly Thr Pro
210 215 220
Phe Gly Cys Pro Ala Gly Arg Lys Glu Lys Pro Ala Asp Pro Val Glu
225 230 235 240
Trp Thr Val Met Asp Val Val Glu Tyr Phe Thr Glu Ala Gly Phe Pro
245 250 255
Glu Gln Ala Thr Ala Phe Gln Glu Gln Glu Ile Asp Gly Lys Ser Leu
260 265 270
Leu Leu Met Gln Arg Thr Asp Val Leu Thr Gly Leu Ser Ile Arg Leu
275 280 285
Gly Pro Ala Leu Lys Ile Tyr Glu His His Ile Lys Val Leu Gln Gln
290 295 300
Gly His Phe Glu Asp Asp Asp Pro Glu Gly Phe Leu Gly
305 310 315

<210> 3
<211> 232

<212> PRT
 <213> Oryctolagus cuniculus

<400> 3
 Ala Ser Ala Arg Ala Ala Arg Asn Lys Arg Ala Gly Glu Glu Arg Val
 1 5 10 15
 Leu Glu Lys Glu Glu Glu Glu Glu Glu Glu Asp Asp Glu Asp Asp
 20 25 30
 Asp Asp Asp Val Val Ser Glu Gly Ser Glu Val Pro Glu Ser Asp Arg
 35 40 45
 Pro Ala Gly Ala Gln His His Gln Leu Asn Gly Gly Glu Arg Gly Pro
 50 55 60
 Gln Thr Ala Lys Glu Arg Ala Lys Glu Trp Ser Leu Cys Gly Pro His
 65 70 75 80
 Pro Gly Gln Glu Glu Gly Arg Gly Pro Ala Ala Gly Ser Gly Thr Arg
 85 90 95
 Gln Val Phe Ser Met Ala Ala Leu Ser Lys Glu Gly Gly Ser Ala Ser
 100 105 110
 Ser Thr Thr Gly Pro Asp Ser Pro Ser Pro Val Pro Leu Pro Pro Gly
 115 120 125
 Lys Pro Ala Leu Pro Gly Ala Asp Gly Thr Pro Phe Gly Cys Pro Ala
 130 135 140
 Gly Arg Lys Glu Lys Pro Ala Asp Pro Val Glu Trp Thr Val Met Asp
 145 150 155 160
 Val Val Glu Tyr Phe Thr Glu Ala Gly Phe Pro Glu Gln Ala Thr Ala
 165 170 175
 Phe Gln Glu Gln Glu Ile Asp Gly Lys Ser Leu Leu Leu Met Gln Arg
 180 185 190
 Thr Asp Val Leu Thr Gly Leu Ser Ile Arg Leu Gly Pro Ala Leu Lys
 195 200 205
 Ile Tyr Glu His His Ile Lys Val Leu Gln Gln Gly His Phe Glu Asp
 210 215 220
 Asp Asp Pro Glu Gly Phe Leu Gly
 225 230

<210> 4
 <211> 252
 <212> PRT
 <213> Oryctolagus cuniculus

<400> 4
 Thr Arg Leu Gly Ala Leu Ala Leu Pro Arg Gly Asp Arg Pro Gly Arg
 1 5 10 15
 Ala Pro Pro Ala Ala Ser Ala Arg Ala Ala Arg Asn Lys Arg Ala Gly
 20 25 30
 Glu Glu Arg Val Leu Glu Lys Glu Glu Glu Glu Glu Glu Glu Asp
 35 40 45
 Asp Glu Asp Asp Asp Asp Val Val Ser Glu Gly Ser Glu Val Pro
 50 55 60
 Glu Ser Asp Arg Pro Ala Gly Ala Gln His His Gln Leu Asn Gly Gly
 65 70 75 80
 Glu Arg Gly Pro Gln Thr Ala Lys Glu Arg Ala Lys Glu Trp Ser Leu
 85 90 95
 Cys Gly Pro His Pro Gly Gln Glu Glu Gly Arg Gly Pro Ala Ala Gly
 100 105 110
 Ser Gly Thr Arg Gln Val Phe Ser Met Ala Ala Leu Ser Lys Glu Gly
 115 120 125

Gly Ser Ala Ser Ser Thr Thr Gly Pro Asp Ser Pro Ser Pro Val Pro
 130 135 140
 Leu Pro Pro Gly Lys Pro Ala Leu Pro Gly Ala Asp Gly Thr Pro Phe
 145 150 155 160
 Gly Cys Pro Ala Gly Arg Lys Glu Lys Pro Ala Asp Pro Val Glu Trp
 165 170 175
 Thr Val Met Asp Val Val Glu Tyr Phe Thr Glu Ala Gly Phe Pro Glu
 180 185 190
 Gln Ala Thr Ala Phe Gln Glu Gln Glu Ile Asp Gly Lys Ser Leu Leu
 195 200 205
 Leu Met Gln Arg Thr Asp Val Leu Thr Gly Leu Ser Ile Arg Leu Gly
 210 215 220
 Pro Ala Leu Lys Ile Tyr Glu His His Ile Lys Val Leu Gln Gln Gly
 225 230 235 240
 His Phe Glu Asp Asp Asp Pro Glu Gly Phe Leu Gly
 245 250

<210> 5
 <211> 557
 <212> PRT
 <213> *Oryctolagus cuniculus*

<400> 5
 Met Lys Asn Gln Asp Lys Lys Asn Gly Ala Ala Lys Gln Pro Asn Pro
 1 5 10 15
 Lys Ser Ser Pro Gly Gln Pro Glu Ala Gly Ala Glu Gly Ala Gln Gly
 20 25 30
 Arg Pro Gly Arg Pro Ala Pro Ala Arg Glu Ala Glu Gly Ala Ser Ser
 35 40 45
 Gln Ala Pro Gly Arg Pro Glu Gly Ala Gln Ala Lys Thr Ala Gln Pro
 50 55 60
 Gly Ala Leu Cys Asp Val Ser Glu Glu Leu Ser Arg Gln Leu Glu Asp
 65 70 75 80
 Ile Leu Ser Thr Tyr Cys Val Asp Asn Asn Gln Gly Ala Pro Gly Glu
 85 90 95
 Asp Gly Val Gln Gly Glu Pro Pro Glu Pro Glu Asp Ala Glu Lys Ser
 100 105 110
 Arg Ala Tyr Val Ala Arg Asn Gly Glu Pro Glu Pro Gly Thr Pro Val
 115 120 125
 Val Asn Gly Glu Lys Glu Thr Ser Lys Ala Glu Pro Gly Thr Glu Glu
 130 135 140
 Ile Arg Thr Ser Asp Glu Val Gly Asp Arg Asp His Arg Arg Pro Gln
 145 150 155 160
 Glu Lys Lys Lys Ala Lys Gly Leu Gly Lys Glu Ile Thr Leu Leu Met
 165 170 175
 Gln Thr Leu Asn Thr Leu Ser Thr Pro Glu Glu Lys Leu Ala Ala Leu
 180 185 190
 Cys Lys Lys Tyr Ala Glu Leu Leu Glu Glu His Arg Asn Ser Gln Lys
 195 200 205
 Gln Met Lys Leu Leu Gln Lys Lys Gln Ser Gln Leu Val Gln Glu Lys
 210 215 220
 Asp His Leu Arg Gly Glu His Ser Lys Ala Ile Leu Ala Arg Ser Lys
 225 230 235 240
 Leu Glu Ser Leu Cys Arg Glu Leu Gln Arg His Asn Arg Ser Leu Lys
 245 250 255
 Glu Glu Gly Val Gln Arg Ala Arg Glu Glu Glu Glu Lys Arg Lys Glu
 260 265 270

Val Thr Ser His Phe Gln Met Thr Leu Asn Asp Ile Gln Leu Gln Met
 275 280 285
 Glu Gln His Asn Glu Arg Asn Ser Lys Leu Arg Gln Glu Asn Met Glu
 290 295 300
 Leu Ala Glu Arg Leu Lys Lys Leu Ile Glu Gln Tyr Glu Leu Arg Glu
 305 310 315 320
 Glu His Ile Asp Lys Val Phe Lys His Lys Asp Leu Gln Gln Gln Leu
 325 330 335
 Val Asp Ala Lys Leu Gln Gln Ala Gln Glu Met Leu Lys Glu Ala Glu
 340 345 350
 Glu Arg His Gln Arg Glu Lys Asp Phe Leu Leu Lys Glu Ala Val Glu
 355 360 365
 Ser Gln Arg Met Cys Glu Leu Met Lys Gln Gln Glu Thr His Leu Lys
 370 375 380
 Gln Gln Leu Ala Leu Tyr Thr Glu Lys Phe Glu Glu Phe Gln Asn Thr
 385 390 395 400
 Leu Ser Lys Ser Ser Glu Val Phe Thr Thr Phe Lys Gln Glu Met Glu
 405 410 415
 Lys Met Thr Lys Lys Ile Lys Lys Leu Glu Lys Glu Thr Thr Met Tyr
 420 425 430
 Arg Ser Arg Trp Glu Ser Ser Asn Lys Ala Leu Leu Glu Met Ala Glu
 435 440 445
 Glu Lys Thr Leu Arg Asp Lys Glu Leu Glu Gly Leu Gln Val Lys Ile
 450 455 460
 Gln Arg Leu Glu Lys Leu Cys Arg Ala Leu Gln Thr Glu Arg Asn Asp
 465 470 475 480
 Leu Asn Lys Arg Val Gln Asp Leu Ser Ala Gly Gly Gln Gly Pro Val
 485 490 495
 Ser Asp Ser Gly Pro Glu Arg Arg Pro Glu Pro Ala Thr Thr Ser Lys
 500 505 510
 Glu Gln Gly Val Glu Gly Pro Gly Ala Gln Val Pro Asn Ser Pro Arg
 515 520 525
 Ala Thr Asp Ala Ser Cys Cys Ala Gly Ala Pro Ser Thr Glu Ala Ser
 530 535 540
 Gly Gln Thr Gly Pro Gln Glu Pro Thr Thr Ala Thr Ala
 545 550 555

<210> 6

<211> 151

<212> PRT

<213> Homo sapiens

<400> 6

Met Ser Lys Asn Thr Val Ser Ser Ala Arg Phe Arg Lys Val Asp Val
 1 5 10 15
 Asp Glu Tyr Asp Glu Asn Lys Phe Val Asp Glu Glu Asp Gly Gly Asp
 20 25 30
 Gly Gln Ala Gly Pro Asp Glu Gly Glu Val Asp Ser Cys Leu Arg Gln
 35 40 45
 Gly Asn Met Thr Ala Ala Leu Gln Ala Ala Leu Lys Asn Pro Pro Ile
 50 55 60
 Asn Thr Lys Ser Gln Ala Val Lys Asp Arg Ala Gly Ser Ile Val Leu
 65 70 75 80
 Lys Val Leu Ile Ser Phe Lys Ala Asn Asp Ile Glu Lys Ala Val Gln
 85 90 95
 Ser Leu Asp Lys Asn Gly Val Asp Leu Leu Met Lys Tyr Ile Tyr Lys
 100 105 110

Gly Phe Glu Ser Pro Ser Asp Asn Ser Ser Ala Met Leu Leu Gln Trp
 115 120 125
 His Glu Lys Ala Leu Ala Ala Gly Gly Val Gly Ser Ile Val Arg Val
 130 135 140
 Leu Thr Ala Arg Lys Thr Val
 145 150

<210> 7
 <211> 217
 <212> PRT
 <213> Homo sapiens

<400> 7
 Glu Glu Arg Val Leu Glu Lys Glu Glu Glu Glu Asp Asp Asp Glu Asp
 1 5 10 15
 Glu Asp Glu Glu Asp Asp Val Ser Glu Gly Ser Glu Val Pro Glu Ser
 20 25 30
 Asp Arg Pro Ala Gly Ala Gln His His Gln Leu Asn Gly Glu Arg Gly
 35 40 45
 Pro Gln Ser Ala Lys Glu Arg Val Lys Glu Trp Thr Pro Cys Gly Pro
 50 55 60
 His Gln Gly Gln Asp Glu Gly Arg Gly Pro Ala Pro Gly Ser Gly Thr
 65 70 75 80
 Arg Gln Val Phe Ser Met Ala Ala Met Asn Lys Glu Gly Gly Thr Ala
 85 90 95
 Ser Val Ala Thr Gly Pro Asp Ser Pro Ser Pro Val Pro Leu Pro Pro
 100 105 110
 Gly Lys Pro Ala Leu Pro Gly Ala Asp Gly Thr Pro Phe Gly Cys Pro
 115 120 125
 Pro Gly Arg Lys Glu Lys Pro Ser Asp Pro Val Glu Trp Thr Val Met
 130 135 140
 Asp Val Val Glu Tyr Phe Thr Glu Ala Gly Phe Pro Glu Gln Ala Thr
 145 150 155 160
 Ala Phe Gln Glu Gln Glu Ile Asp Gly Lys Ser Leu Leu Leu Met Gln
 165 170 175
 Arg Thr Asp Val Leu Thr Gly Leu Ser Ile Arg Leu Gly Pro Ala Leu
 180 185 190
 Lys Ile Tyr Glu His His Ile Lys Val Leu Gln Gln Gly His Phe Glu
 195 200 205
 Asp Asp Asp Pro Asp Gly Phe Leu Gly
 210 215

<210> 8
 <211> 530
 <212> PRT
 <213> Homo sapiens

<400> 8
 Lys Ser Ser Pro Gly Gln Pro Glu Ala Gly Pro Glu Gly Ala Gln Glu
 1 5 10 15
 Arg Pro Ser Gln Ala Ala Pro Ala Val Glu Ala Glu Gly Pro Gly Ser
 20 25 30
 Ser Gln Ala Pro Arg Lys Pro Glu Gly Ala Gln Ala Arg Thr Ala Gln
 35 40 45
 Ser Gly Ala Leu Arg Asp Val Ser Glu Glu Leu Ser Arg Gln Leu Glu
 50 55 60
 Asp Ile Leu Ser Thr Tyr Cys Val Asp Asn Asn Gln Gly Gly Pro Gly

Arg Ala
530

<210> 9
<211> 20
<212> PRT
<213> Homo sapiens

<400> 9
Val Asp Val Asp Glu Tyr Asp Glu Asn Lys Phe Val Asp Glu Glu Asp
1 5 10 15
Gly Gly Asp Gly
20

<210> 10
<211> 1404
<212> DNA
<213> Oryctolagus cuniculus

<220>
<221> CDS
<222> (58)...(510)

<400> 10
aagcctcgca gcggctcgggg cggcgccgcg gaggctcgag ggccggcgggc ggccggcg atg 60
Met
1

tcg aag aac acg gtg tcg tcg gcg cgg ttc cgg aag gtg gac gtg gat 108
Ser Lys Asn Thr Val Ser Ser Ala Arg Phe Arg Lys Val Asp Val Asp
5 10 15

gag tac gac gag aac aag ttc gtg gac gag gaa gac ggc ggc gac ggc 156
Glu Tyr Asp Glu Asn Lys Phe Val Asp Glu Glu Asp Gly Gly Asp Gly
20 25 30

cag gcg ggg ccg gac gag ggc gag gtg gac tcg tgc ctg cgg caa ggg 204
Gln Ala Gly Pro Asp Glu Gly Glu Val Asp Ser Cys Leu Arg Gln Gly
35 40 45

aac atg aca gcc gcc ctg cag gcg gcg ctg aag aac cct ccc atc aac 252
Asn Met Thr Ala Ala Leu Gln Ala Ala Leu Lys Asn Pro Pro Ile Asn
50 55 60 65

acc agg agc cag gcg gtg aag gac cgg gca ggc agc atc gtg ctg aag 300
Thr Arg Ser Gln Ala Val Lys Asp Arg Ala Gly Ser Ile Val Leu Lys
70 75 80

gtg ctc atc tcc ttc aag gcc ggc gac ata gaa aag gcc gtg cag tcc 348
Val Leu Ile Ser Phe Lys Ala Gly Asp Ile Glu Lys Ala Val Gln Ser
85 90 95

ctg gac agg aac ggc gtg gac ctg ctc atg aag tac atc tac aag ggc 396
Leu Asp Arg Asn Gly Val Asp Leu Leu Met Lys Tyr Ile Tyr Lys Gly
100 105 110

ttc gag agc ccc tcc gac aac agc agc gcc gtg ctc ctg cag tgg cac 444

Phe Glu Ser Pro Ser Asp Asn Ser Ser Ala Val Leu Leu Gln Trp His
 115 120 125
 gag aag gcg ctg gct gca gga gga gtg ggc tcc atc gtc cgt gtc ctg 492
 Glu Lys Ala Leu Ala Ala Gly Gly Val Gly Ser Ile Val Arg Val Leu
 130 135 140 145
 act gca agg aaa acc gtg tagcctggca ggaacgggtg cctgccgggg 540
 Thr Ala Arg Lys Thr Val
 150
 agcgggagct gccggtacaa agacaaaaac gccagatgc cgcgctgcc ctgtgggagg 600
 cgtctgttcc cagcttcgct ttttcccttt cccgtgtctg tcaggattac ataaggtttc 660
 ccttcgtgag aatcggagtg gcgcagaggg tcctgttcat acgcgcctg cgtccggctg 720
 tgtaagaccc ctgccttcag gtccttgag caacggtagc gtgtcgccgg ctgggtttgg 780
 ttttgtctg gagggatctg gtcagaattt gaggccagtt tcctaactca ttgctggcca 840
 ggaaatgac ttcatttaaa aaaaaaaaaa agactggcag ctattatgca aaactggacc 900
 ctcttccctt atttaagcag agtgagtttc tggaaccagt ggtgcccccc cccccgcccc 960
 ggccgcgctc ctgctcaagg gaagcctccc tgcagagcag cagagccccct gggcaggagc 1020
 gccgcgtccc gctcccagga gacagcatgc gcggtcacgc ggcacttcct gtgcctccca 1080
 gcccagtgcc cccggagtgc ttcagggcga cagggacctc agaagactgg atccgatcca 1140
 gagcacgccc cattcttggg tcagctcagt gttttcaaaa ggaacgtgct accgtgggta 1200
 gagcacactg gttctcagaa cacggccggc gcttgacggg tgtcacagct ccagaacaaa 1260
 tcttgggaga caggcgagcg cgagtcgccg ggcaggaatt ccacacactc gtgctgtttt 1320
 tgatacctgc tttttgtttt gttttgtaaa aatgatgcac ttgagaaaat aaaacgtcag 1380
 tgttgacaaa aaaaaaaaaa aaaa 1404

 <210> 11
 <211> 1617
 <212> DNA
 <213> *Oryctolagus cuniculus*

 <220>
 <221> CDS
 <222> (1)...(951)

 <400> 11 48
 gac tgc cgc agc agc agc aac aac cgc tag ccg aag ggt ggc gcg gcg
 Asp Cys Arg Ser Ser Ser Asn Asn Arg * Pro Lys Gly Gly Ala Ala
 1 5 10 15
 cgg gcc ggc ggc ccg gcg cgg ccc gtg agc ctg cgg gaa gtc gtg cgc 96
 Arg Ala Gly Gly Pro Ala Arg Pro Val Ser Leu Arg Glu Val Val Arg
 20 25 30
 tac ctc ggg ggt agc agc ggc gct ggc ggc cgc ctg acc cgc ggc cgc 144
 Tyr Leu Gly Gly Ser Ser Gly Ala Gly Gly Arg Leu Thr Arg Gly Arg
 35 40 45
 gtg cag ggt ctg ctg gaa gag gag gcg gcg gcg cgg ggc cgc ctg gag 192
 Val Gln Gly Leu Leu Glu Glu Glu Ala Ala Ala Arg Gly Arg Leu Glu
 50 55 60
 cgc acc cgt ctc gga gcg ctt gcg ctg ccc cgc ggg gac agg ccc gga 240
 Arg Thr Arg Leu Gly Ala Leu Ala Leu Pro Arg Gly Asp Arg Pro Gly
 65 70 75

cgg gcg cca ccg gcc gcc agc gcc cgc gcg gcg cgg aac aag aga gct Arg Ala Pro Pro Ala Ala Ser Ala Arg Ala Ala Arg Asn Lys Arg Ala 80 85 90 95	288
ggc gag gag cga gtg ctt gaa aag gag gag gag gag gag gag gag gaa Gly Glu Glu Arg Val Leu Glu Lys Glu Glu Glu Glu Glu Glu Glu Glu 100 105 110	336
gac gac gag gac gac gac gac gac gtc gtg tcc gag ggc tcc gag gtg Asp Asp Glu Asp Asp Asp Asp Asp Val Val Ser Glu Gly Ser Glu Val 115 120 125	384
ccc gag agc gat cgt ccc gcg ggt gcg cag cat cac cag ctg aat ggc Pro Glu Ser Asp Arg Pro Ala Gly Ala Gln His His Gln Leu Asn Gly 130 135 140	432
ggc gag cgc ggc ccg cag acc gcc aag gag cgg gcc aag gag tgg tcc Gly Glu Arg Gly Pro Gln Thr Ala Lys Glu Arg Ala Lys Glu Trp Ser 145 150 155	480
ctg tgt ggc ccc cac cct ggc cag gag gaa ggg cgg ggg ccg gcc gcg Leu Cys Gly Pro His Pro Gly Gln Glu Glu Gly Arg Gly Pro Ala Ala 160 165 170 175	528
ggc agt ggc acc cgc cag gtg ttc tcc atg gcg gcc ttg agt aag gag Gly Ser Gly Thr Arg Gln Val Phe Ser Met Ala Ala Leu Ser Lys Glu 180 185 190	576
ggg gga tca gcc tct tcc acc acc ggg cct gac tcc ccg tcc ccg gtg Gly Gly Ser Ala Ser Ser Thr Thr Gly Pro Asp Ser Pro Ser Pro Val 195 200 205	624
cct ttg ccc ccc ggg aag cca gcc ctc cca gga gcc gat ggg acc ccc Pro Leu Pro Pro Gly Lys Pro Ala Leu Pro Gly Ala Asp Gly Thr Pro 210 215 220	672
ttt ggc tgc cct gcc ggg cgc aaa gag aag ccg gca gac ccc gtg gag Phe Gly Cys Pro Ala Gly Arg Lys Glu Lys Pro Ala Asp Pro Val Glu 225 230 235	720
tgg aca gtc atg gac gtc gtg gag tac ttc acc gag gcg ggc ttc cct Trp Thr Val Met Asp Val Val Glu Tyr Phe Thr Glu Ala Gly Phe Pro 240 245 250 255	768
gag caa gcc acg gct ttc cag gag cag gag atc gac ggc aag tcc ctg Glu Gln Ala Thr Ala Phe Gln Glu Gln Glu Ile Asp Gly Lys Ser Leu 260 265 270	816
ctg ctc atg cag cgc acc gat gtc ctc acc ggc ctg tcc atc cgc ctg Leu Leu Met Gln Arg Thr Asp Val Leu Thr Gly Leu Ser Ile Arg Leu 275 280 285	864
ggg cca gcg ttg aaa atc tat gag cac cat atc aag gtg ctg cag cag Gly Pro Ala Leu Lys Ile Tyr Glu His His Ile Lys Val Leu Gln Gln 290 295 300	912
ggg cac ttc gag gac gat gac ccg gaa ggc ttc ctg gga tgagcacaga	961

Gly His Phe Glu Asp Asp Asp Pro Glu Gly Phe Leu Gly
 305 310 315

gcccgcgcgc cccttgcccc cccccccacc ccgcctggac ccattcctgc ctccatgtca 1021
 cccaagggtgt cccagaggcc aggagctgga ctgggcaggc gaggggtgcg gacctaccct 1081
 gattctggta gggggcgggg ccttgctgtg ctcatgtcta cccccccacc ccgtgtgtgt 1141
 ctctgcacct gccccagca caccctccc ggagcctgga tgcgcctgg gactctggcc 1201
 tgctcatttt gccccagat cagccccctc cctccctect gtcccaggac attttttaaa 1261
 agaaaaaaag gaaaaaaa aattggggag ggggctggga aggtgcccc agatcctcct 1321
 cggcccaacc aggtgtttat tcctatatat atatatatat gttttgttct gcctgttttt 1381
 cgttttttgg tgcgtggcct ttcttccctc ccaccaccac tcatggcccc agccctgtct 1441
 gccctgtcgg cgggagcagc tgggaatggg aggaggggtg gaccttggtt ctgtctccca 1501
 ccctctctcc cgttggttct gttgtcgctc cagctggctg tattgttttt taatattgca 1561
 ccgaagggtt gttttttttt ttttaaataa aatttttaaa aaaggaaaaa aaaaaa 1617

<210> 12
 <211> 1362
 <212> DNA
 <213> *Oryctolagus cuniculus*

<220>
 <221> CDS
 <222> (1) ... (696)

<400> 12 48
 gcc agc gcc cgc gcg gcg cgg aac aag aga gct ggc gag gag cga gtg
 Ala Ser Ala Arg Ala Ala Arg Asn Lys Arg Ala Gly Glu Glu Arg Val
 1 5 10 15

ctt gaa aag gag gag gag gag gag gag gaa gac gac gag gac gac 96
 Leu Glu Lys Glu Glu Glu Glu Glu Glu Glu Asp Asp Glu Asp Asp
 20 25 30

gac gac gac gtc gtg tcc gag ggc tcg gag gtg ccc gag agc gat cgt 144
 Asp Asp Asp Val Val Ser Glu Gly Ser Glu Val Pro Glu Ser Asp Arg
 35 40 45

ccc gcg ggt gcg cag cat cac cag ctg aat ggc ggc gag cgc ggc ccg 192
 Pro Ala Gly Ala Gln His His Gln Leu Asn Gly Gly Glu Arg Gly Pro
 50 55 60

cag acc gcc aag gag cgg gcc aag gag tgg tcg ctg tgt ggc ccc cac 240
 Gln Thr Ala Lys Glu Arg Ala Lys Glu Trp Ser Leu Cys Gly Pro His
 65 70 75 80

cct ggc cag gag gaa ggg cgg ggg ccg gcc gcg ggc agt ggc acc cgc 288
 Pro Gly Gln Glu Glu Gly Arg Gly Pro Ala Ala Gly Ser Gly Thr Arg
 85 90 95

cag gtg ttc tcc atg gcg gcc ttg agt aag gag ggg gga tca gcc tct 336
 Gln Val Phe Ser Met Ala Ala Leu Ser Lys Glu Gly Gly Ser Ala Ser
 100 105 110

tcg acc acc ggg cct gac tcc ccg tcc ccg gtg cct ttg ccc ccc ggg 384
 Ser Thr Thr Gly Pro Asp Ser Pro Ser Pro Val Pro Leu Pro Pro Gly
 115 120 125

aag cca gcc ctc cca gga gcc gat ggg acc ccc ttt ggc tgc cct gcc 432
Lys Pro Ala Leu Pro Gly Ala Asp Gly Thr Pro Phe Gly Cys Pro Ala
130 135 140

ggg cgc aaa gag aag ccg gca gac ccc gtg gag tgg aca gtc atg gac 480
Gly Arg Lys Glu Lys Pro Ala Asp Pro Val Glu Trp Thr Val Met Asp
145 150 155 160

gtc gtg gag tac ttc acc gag gcg ggc ttc cct gag caa gcc acg gct 528
Val Val Glu Tyr Phe Thr Glu Ala Gly Phe Pro Glu Gln Ala Thr Ala
165 170 175

ttc cag gag cag gag atc gac ggc aag tcc ctg ctg ctc atg cag cgc 576
Phe Gln Glu Gln Glu Ile Asp Gly Lys Ser Leu Leu Leu Met Gln Arg
180 185 190

acc gat gtc ctc acc ggc ctg tcc atc cgc ctg ggg cca gcg ttg aaa 624
Thr Asp Val Leu Thr Gly Leu Ser Ile Arg Leu Gly Pro Ala Leu Lys
195 200 205

atc tat gag cac cat atc aag gtg ctg cag cag ggt cac ttc gag gac 672
Ile Tyr Glu His His Ile Lys Val Leu Gln Gln Gly His Phe Glu Asp
210 215 220

gat gac ccg gaa ggc ttc ctg gga tgagcacaga gccgccgcgc cccttgcccc 726
Asp Asp Pro Glu Gly Phe Leu Gly
225 230

caccgccacc ccgcctggac ccattcctgc ctccatgtca cccaagggtgt cccagaggcc 786
aggagctgga ctgggcaggc gaggggtgcg gacctaccct gattctggta gggggcgggg 846
ccttgctgtg ctcatgtcta ccccccacc ccgtgtgtgt ctctgcacct gccccagca 906
caccctccc ggagcctgga tgcgcctgg gactctggcc tgctcatttt gccccagat 966
cagccccctc cctccctcct gtcccaggac attttttaaa agaaaaaaag gaaaaaaaaa 1026
aattggggag ggggctggga aggtgcccc agatcctcct cggcccaacc aggtgtttat 1086
tcctatatat atatatatat gttttgttct gcctgttttt cgtttttttg tgctggcct 1146
ttcttccctc ccaccaccac tcatggcccc agccctgtc gccctgtcgg cgggagcagc 1206
tggaatggg aggagggtgg gaccttgggt ctgtctccca cctctctcc cgttggttct 1266
gttgctcctc cagctggctg tattgttttt taatattgca ccgaagggtt gttttttttt 1326
ttttaataaa aattttaaaa aaaggaaaaa aaaaaa 1362

<210> 13
<211> 1422
<212> DNA
<213> *Oryctolagus cuniculus*

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<222> (1)...(756)

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Thr Arg Leu Gly Ala Leu Ala Leu Pro Arg Gly Asp Arg Pro Gly Arg
1 5 10 15

gcg cca ccg gcc gcc agc gcc cgc gcg gcg cgg aac aag aga gct ggc 96
Ala Pro Pro Ala Ala Ser Ala Arg Ala Ala Arg Asn Lys Arg Ala Gly
20 25 30

gag gag cga gtg ctt gaa aag gag gag gag gag gag gag gag gaa gac Glu Glu Arg Val Leu Glu Lys Glu Glu Glu Glu Glu Glu Glu Glu Asp 35 40 45	144
gac gag gac gac gac gac gac gtc gtg tcc gag ggc tcg gag gtg ccc Asp Glu Asp Asp Asp Asp Asp Val Val Ser Glu Gly Ser Glu Val Pro 50 55 60	192
gag agc gat cgt ccc gcg ggt gcg cag cat cac cag ctg aat ggc ggc Glu Ser Asp Arg Pro Ala Gly Ala Gln His His Gln Leu Asn Gly Gly 65 70 75 80	240
gag cgc ggc ccg cag acc gcc aag gag cgg gcc aag gag tgg tcg ctg Glu Arg Gly Pro Gln Thr Ala Lys Glu Arg Ala Lys Glu Trp Ser Leu 85 90 95	288
tgt ggc ccc cac cct ggc cag gag gaa ggg cgg ggg ccg gcc gcg ggc Cys Gly Pro His Pro Gly Gln Glu Glu Gly Arg Gly Pro Ala Ala Gly 100 105 110	336
agt ggc acc cgc cag gtg ttc tcc atg gcg gcc ttg agt aag gag ggg Ser Gly Thr Arg Gln Val Phe Ser Met Ala Ala Leu Ser Lys Glu Gly 115 120 125	384
gga tca gcc tct tcg acc acc ggg cct gac tcc ccg tcc ccg gtg cct Gly Ser Ala Ser Ser Thr Thr Gly Pro Asp Ser Pro Ser Pro Val Pro 130 135 140	432
ttg ccc ccc ggg aag cca gcc ctc cca gga gcc gat ggg acc ccc ttt Leu Pro Pro Gly Lys Pro Ala Leu Pro Gly Ala Asp Gly Thr Pro Phe 145 150 155 160	480
ggc tgc cct gcc ggg cgc aaa gag aag ccg gca gac ccc gtg gag tgg Gly Cys Pro Ala Gly Arg Lys Glu Lys Pro Ala Asp Pro Val Glu Trp 165 170 175	528
aca gtc atg gac gtc gtg gag tac ttc acc gag gcg ggc ttc cct gag Thr Val Met Asp Val Val Glu Tyr Phe Thr Glu Ala Gly Phe Pro Glu 180 185 190	576
caa gcc acg gct ttc cag gag cag gag atc gac ggc aag tcc ctg ctg Gln Ala Thr Ala Phe Gln Glu Gln Glu Ile Asp Gly Lys Ser Leu Leu 195 200 205	624
ctc atg cag cgc acc gat gtc ctc acc ggc ctg tcc atc cgc ctg ggg Leu Met Gln Arg Thr Asp Val Leu Thr Gly Leu Ser Ile Arg Leu Gly 210 215 220	672
cca gcg ttg aaa atc tat gag cac cat atc aag gtg ctg cag cag ggt Pro Ala Leu Lys Ile Tyr Glu His His Ile Lys Val Leu Gln Gln Gly 225 230 235 240	720
cac ttc gag gac gat gac ccg gaa ggc ttc ctg gga tgagcacaga His Phe Glu Asp Asp Asp Pro Glu Gly Phe Leu Gly 245 250	766

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gccgccgcgc cccttgcccc cccccccacc ccgcctggac ccattcctgc ctccatgtca      826
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gattctggta gggggcgggg ccttgctgtg ctcattgcta cccccccacc ccgtgtgtgt      946
ctctgcacct gccccagca cccccctccc ggagcctgga tgcgcctgg gactctggcc      1006
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gccctgtcgg cgggagcagc tgggaatggg aggaggggtg gaccttgggt ctgtctccca      1306
ccctctctcc cgttggttct gttgtcgtc cagctggctg tattgctttt taatattgca      1366
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<210> 14
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 <222> (61)...(1731)

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Met Lys Asn Gln Asp Lys Lys Asn Gly Ala Ala Lys Gln Pro Asn Pro
1 5 10 15

aaa agc agc ccg gga cag ccg gaa gca gga gcg gag gga gcc cag ggg      156
Lys Ser Ser Pro Gly Gln Pro Glu Ala Gly Ala Glu Gly Ala Gln Gly
20 25 30

cgg ccc ggc cgg ccg gcc ccc gcc cga gaa gcc gaa ggt gcc agc agc      204
Arg Pro Gly Arg Pro Ala Pro Ala Arg Glu Ala Glu Gly Ala Ser Ser
35 40 45

cag gct ccc ggg agg ccg gag ggg gct caa gcc aaa act gct cag cct      252
Gln Ala Pro Gly Arg Pro Glu Gly Ala Gln Ala Lys Thr Ala Gln Pro
50 55 60

ggg gcg ctc tgt gat gtc tct gag gag ctg agc cgc cag ttg gaa gac      300
Gly Ala Leu Cys Asp Val Ser Glu Glu Leu Ser Arg Gln Leu Glu Asp
65 70 75 80

ata ctc agt aca tac tgt gtg gac aac aac cag ggg gcc ccg ggt gag      348
Ile Leu Ser Thr Tyr Cys Val Asp Asn Asn Gln Gly Ala Pro Gly Glu
85 90 95

gat ggg gtc cag ggt gag ccc cct gaa cct gaa gat gca gag aag tct      396
Asp Gly Val Gln Gly Glu Pro Pro Glu Pro Glu Asp Ala Glu Lys Ser
100 105 110

cgc gcc tat gtg gca agg aat ggg gag ccg gag ccg ggc acc cca gta      444
Arg Ala Tyr Val Ala Arg Asn Gly Glu Pro Glu Pro Gly Thr Pro Val
115 120 125

gtc aat ggc gag aag gag acc tcc aag gca gag ccg ggc acg gaa gag      492
Val Asn Gly Glu Lys Glu Thr Ser Lys Ala Glu Pro Gly Thr Glu Glu

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130	135	140	
atc cgg acg agc gat gag gtc gga gac cga gac cac cgg agg cca cag Ile Arg Thr Ser Asp Glu Val Gly Asp Arg Asp His Arg Arg Pro Gln 145 150 155 160			540
gaa aag aag aag gcc aag ggt ctg gga aag gag atc acg ctg ctg atg Glu Lys Lys Lys Ala Lys Gly Leu Gly Lys Glu Ile Thr Leu Leu Met 165 170 175			588
cag aca ctg aac acg ctg agc acc cca gag gag aag ctg gcg gct ctg Gln Thr Leu Asn Thr Leu Ser Thr Pro Glu Glu Lys Leu Ala Ala Leu 180 185 190			636
tgc aag aag tat gcg gaa ctg ctc gag gag cac cgg aac tcg cag aag Cys Lys Lys Tyr Ala Glu Leu Leu Glu Glu His Arg Asn Ser Gln Lys 195 200 205			684
cag atg aag ctg ctg cag aag aag cag agc cag ctg gtg cag gag aag Gln Met Lys Leu Leu Gln Lys Lys Gln Ser Gln Leu Val Gln Glu Lys 210 215 220			732
gac cac ctg cgt ggc gag cac agc aag gcc atc ctg gcc cgc agc aag Asp His Leu Arg Gly Glu His Ser Lys Ala Ile Leu Ala Arg Ser Lys 225 230 235 240			780
ctc gag agc ctg tgc cgg gag ctg cag cgg cac aac cgc tcg ctc aag Leu Glu Ser Leu Cys Arg Glu Leu Gln Arg His Asn Arg Ser Leu Lys 245 250 255			828
gaa gaa ggt gtg cag cga gcc cga gag gag gag gag aag cgc aag gag Glu Glu Gly Val Gln Arg Ala Arg Glu Glu Glu Glu Lys Arg Lys Glu 260 265 270			876
gtg acg tca cac ttc cag atg acg ctc aac gac att cag ctg cag atg Val Thr Ser His Phe Gln Met Thr Leu Asn Asp Ile Gln Leu Gln Met 275 280 285			924
gag cag cac aac gag cgc aac tcc aag ctg cgc cag gag aac atg gag Glu Gln His Asn Glu Arg Asn Ser Lys Leu Arg Gln Glu Asn Met Glu 290 295 300			972
ctg gcc gag cgg ctc aag aag ctg att gag cag tac gag ctg cga gaa Leu Ala Glu Arg Leu Lys Lys Leu Ile Glu Gln Tyr Glu Leu Arg Glu 305 310 315 320			1020
gag cac atc gac aaa gtc ttc aaa cac aag gat ctg cag cag cag ctg Glu His Ile Asp Lys Val Phe Lys His Lys Asp Leu Gln Gln Gln Leu 325 330 335			1068
gtg gac gcc aag ctc cag cag gcc cag gag atg ctg aag gag gca gag Val Asp Ala Lys Leu Gln Gln Ala Gln Glu Met Leu Lys Glu Ala Glu 340 345 350			1116
gag cgg cac cag cgg gag aag gac ttt ctc ctg aag gag gcc gtg gag Glu Arg His Gln Arg Glu Lys Asp Phe Leu Leu Lys Glu Ala Val Glu 355 360 365			1164

tcc cag agg atg tgc gag ctg atg aag caa cag gag acc cac ctg aag Ser Gln Arg Met Cys Glu Leu Met Lys Gln Gln Glu Thr His Leu Lys 370 375 380	1212
cag cag ctt gcc cta tac aca gag aag ttt gag gag ttc cag aac act Gln Gln Leu Ala Leu Tyr Thr Glu Lys Phe Glu Glu Phe Gln Asn Thr 385 390 395 400	1260
ctt tcc aaa agc agc gag gtg ttc acc aca ttc aaa cag gaa atg gaa Leu Ser Lys Ser Ser Glu Val Phe Thr Thr Phe Lys Gln Glu Met Glu 405 410 415	1308
aag atg aca aag aag atc aag aag ctg gag aaa gag acc acc atg tac Lys Met Thr Lys Lys Ile Lys Lys Leu Glu Lys Glu Thr Thr Met Tyr 420 425 430	1356
cgt tcc cgg tgg gag agc agc aac aag gcc ctg ctt gag atg gct gag Arg Ser Arg Trp Glu Ser Ser Asn Lys Ala Leu Leu Glu Met Ala Glu 435 440 445	1404
gag aaa aca ctc cgg gac aaa gag ctg gaa ggc ctg cag gtg aaa atc Glu Lys Thr Leu Arg Asp Lys Glu Leu Glu Gly Leu Gln Val Lys Ile 450 455 460	1452
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ctg aac aag agg gtg cag gac ctg agt gcc ggt ggc cag ggc ccc gtc Leu Asn Lys Arg Val Gln Asp Leu Ser Ala Gly Gly Gln Gly Pro Val 485 490 495	1548
tcc gac agc ggt cct gag cgg agg cca gag ccc gcc acc acc tcc aag Ser Asp Ser Gly Pro Glu Arg Arg Pro Glu Pro Ala Thr Thr Ser Lys 500 505 510	1596
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gcc aca gac gct tcc tgc tgc gca ggt gca ccc agc aca gag gca tca Ala Thr Asp Ala Ser Cys Cys Ala Gly Ala Pro Ser Thr Glu Ala Ser 530 535 540	1692
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<211> 1925

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (118) ... (570)

<400> 15

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Met

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tcg aag aac aca gtg tcg tcg gcc cgc ttc cgg aag gtg gac gtg gat	168
Ser Lys Asn Thr Val Ser Ser Ala Arg Phe Arg Lys Val Asp Val Asp	
5 10 15	
gaa tat gac gag aac aag ttc gtg gac gaa gaa gat ggg ggc gac ggc	216
Glu Tyr Asp Glu Asn Lys Phe Val Asp Glu Glu Asp Gly Gly Asp Gly	
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cag gcc ggg ccc gac gag ggc gag gtg gac tcc tgc ctg cgg caa gga	264
Gln Ala Gly Pro Asp Glu Gly Glu Val Asp Ser Cys Leu Arg Gln Gly	
35 40 45	
aac atg aca gct gcc cta cag gca gct ctg aag aac ccc cct atc aac	312
Asn Met Thr Ala Ala Leu Gln Ala Ala Leu Lys Asn Pro Pro Ile Asn	
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acc aag agt cag gca gtg aag gac cgg gca ggc agc att gtc ttg aag	360
Thr Lys Ser Gln Ala Val Lys Asp Arg Ala Gly Ser Ile Val Leu Lys	
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Val Leu Ile Ser Phe Lys Ala Asn Asp Ile Glu Lys Ala Val Gln Ser	
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ctg gac aag aat ggt gtg gat ctc cta atg aag tat att tat aaa gga	456
Leu Asp Lys Asn Gly Val Asp Leu Leu Met Lys Tyr Ile Tyr Lys Gly	
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<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (1)...(651)

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 Glu Asp Glu Glu Asp Asp Val Ser Glu Gly Ser Glu Val Pro Glu Ser
 20 25 30
 gac cgt cct gca ggt gcc cag cac cac cag ctt aac ggc gag cgg gga 144
 Asp Arg Pro Ala Gly Ala Gln His His Gln Leu Asn Gly Glu Arg Gly
 35 40 45
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 Pro Gln Ser Ala Lys Glu Arg Val Lys Glu Trp Thr Pro Cys Gly Pro
 50 55 60
 cac cag ggc cag gat gaa ggg cgg ggg cca gcc ccg ggc agc ggc acc 240
 His Gln Gly Gln Asp Glu Gly Arg Gly Pro Ala Pro Gly Ser Gly Thr
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 Arg Gln Val Phe Ser Met Ala Ala Met Asn Lys Glu Gly Gly Thr Ala
 85 90 95
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 Ser Val Ala Thr Gly Pro Asp Ser Pro Ser Pro Val Pro Leu Pro Pro
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 Gly Lys Pro Ala Leu Pro Gly Ala Asp Gly Thr Pro Phe Gly Cys Pro
 115 120 125
 ccc ggg cgc aaa gag aag cca tct gat ccc gtc gag tgg acc gtg atg 432
 Pro Gly Arg Lys Glu Lys Pro Ser Asp Pro Val Glu Trp Thr Val Met
 130 135 140
 gat gtc gtc gaa tat ttt act gag gct gga ttc ccg gag cag gcg aca 480
 Asp Val Val Glu Tyr Phe Thr Glu Ala Gly Phe Pro Glu Gln Ala Thr
 145 150 155 160

gct ttc caa gag cag gaa att gat ggc aaa tct ttg ctg ctc atg cag 528
 Ala Phe Gln Glu Gln Glu Ile Asp Gly Lys Ser Leu Leu Leu Met Gln 175
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cgc aca gat gtg ctc acc ggc ctg tcc atc cgc ctc ggg cca gcc ctg 576
 Arg Thr Asp Val Leu Thr Gly Leu Ser Ile Arg Leu Gly Pro Ala Leu 190
 180

aaa atc tac gag cac cac atc aag gtg ctt cag caa ggc cac ttt gag 624
 Lys Ile Tyr Glu His His Ile Lys Val Leu Gln Gln Gly His Phe Glu 205
 195 200

gat gat gac ccc gat ggc ttc tta ggc tgagcgccca gcctcaccac 671
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 Ser Ser Gln Ala Pro Arg Lys Pro Glu Gly Ala Gln Ala Arg Thr Ala 45
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 Val Val Tyr Gly Glu Lys Glu Pro Ser Lys Gly Asp Pro Asn Thr Glu 125
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530

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 Pro Pro Leu Pro Pro Pro Pro Gln Pro Pro Ala Pro Pro Gln Gln Gln
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 Tyr Leu Gly Gly Ser Gly Gly Ala Gly Gly Arg Leu Thr Arg Gly Arg
 260 265 270
 Val Gln Gly Leu Leu Glu Glu Glu Ala Ala Ala Arg Gly Arg Leu Glu
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 Ser Asp Arg Pro Ala Gly Ala Gln His His Gln Leu Asn Gly Glu Arg
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48

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96

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gga gaa gag cga gta ctt gag aaa gaa gag gaa gaa gat gat gat gaa Gly Glu Glu Arg Val Leu Glu Lys Glu Glu Glu Glu Asp Asp Asp Glu 325 330 335	1008
gat gaa gat gaa gaa gat gat gtg tca gag ggc tct gaa gtg ccc gag Asp Glu Asp Glu Glu Asp Asp Val Ser Glu Gly Ser Glu Val Pro Glu 340 345 350	1056
agt gac cgt cct gca ggt gcc cag cac cac cag ctt aac ggc gag cgg Ser Asp Arg Pro Ala Gly Ala Gln His His Gln Leu Asn Gly Glu Arg 355 360 365	1104
gga cct cag agt gcc aag gag agg gtc aag gag tgg acc ccc tgc gga Gly Pro Gln Ser Ala Lys Glu Arg Val Lys Glu Trp Thr Pro Cys Gly 370 375 380	1152
ccg cac cag ggc cag gat gaa ggg cgg ggg cca gcc ccg ggc agc ggc Pro His Gln Gly Gln Asp Glu Gly Arg Gly Pro Ala Pro Gly Ser Gly 385 390 395 400	1200
acc cgc cag gtg ttc tcc atg gca gcc atg aac aag gaa ggg gga aca Thr Arg Gln Val Phe Ser Met Ala Ala Met Asn Lys Glu Gly Gly Thr 405 410 415	1248
gct tct gtt gcc acc ggg cca gac tcc ccg tcc ccc gtg cct ttg ccc Ala Ser Val Ala Thr Gly Pro Asp Ser Pro Ser Pro Val Pro Leu Pro 420 425 430	1296
cca ggc aaa cca gcc cta cct ggg gcc gac ggg acc ccc ttt ggc tgt Pro Gly Lys Pro Ala Leu Pro Gly Ala Asp Gly Thr Pro Phe Gly Cys 435 440 445	1344
ccg ccc ggg cgc aaa gag aag cca tct gat ccc gtc gag tgg acc gtg Pro Pro Gly Arg Lys Glu Lys Pro Ser Asp Pro Val Glu Trp Thr Val 450 455 460	1392
atg gat gtc gtc gaa tat ttt act gag gct gga ttc ccg gag cag gcg Met Asp Val Val Glu Tyr Phe Thr Glu Ala Gly Phe Pro Glu Gln Ala 465 470 475 480	1440
aca gct ttc caa gag cag gaa att gat ggc aaa tct ttg ctg ctc atg	1488

Thr Ala Phe Gln Glu Gln Glu Ile Asp Gly Lys Ser Leu Leu Leu Met
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cag cgc aca gat gtg ctc acc ggc ctg tcc atc cgc ctc ggg cca gcc 1536
 Gln Arg Thr Asp Val Leu Thr Gly Leu Ser Ile Arg Leu Gly Pro Ala
 500 505 510

ctg aaa atc tac gag cac cac atc aag gtg ctt cag caa ggc cac ttt 1584
 Leu Lys Ile Tyr Glu His His Ile Lys Val Leu Gln Gln Gly His Phe
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gag gat gat gac ccc gat ggc ttc tta ggc 1614
 Glu Asp Asp Asp Pro Asp Gly Phe Leu Gly
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aaa agc agc cca gga caa ccg gaa gca gga ccc gag gga gcc cag gag 96
 Lys Ser Ser Pro Gly Gln Pro Glu Ala Gly Pro Glu Gly Ala Gln Glu
 20 25 30

cgg ccc agc cag gcg gct cct gca gta gaa gca gaa ggt ccc ggc agc 144
 Arg Pro Ser Gln Ala Ala Pro Ala Val Glu Ala Glu Gly Pro Gly Ser
 35 40 45

agc cag gct cct cgg aag ccg gag ggt gct caa gcc aga acg gct cag 192
 Ser Gln Ala Pro Arg Lys Pro Glu Gly Ala Gln Ala Arg Thr Ala Gln
 50 55 60

tct ggg gcc ctt cgt gat gtc tct gag gag ctg agc cgc caa ctg gaa 240
 Ser Gly Ala Leu Arg Asp Val Ser Glu Glu Leu Ser Arg Gln Leu Glu
 65 70 75 80

gac ata ctg agc aca tac tgt gtg gac aat aac cag ggg ggc ccc ggc 288
 Asp Ile Leu Ser Thr Tyr Cys Val Asp Asn Asn Gln Gly Gly Pro Gly
 85 90 95

gag gat ggg gca cag ggt gag ccg gct gaa ccc gaa gat gca gag aag 336
 Glu Asp Gly Ala Gln Gly Glu Pro Ala Glu Pro Glu Asp Ala Glu Lys
 100 105 110

tcc cgg acc tat gtg gca agg aat ggg gag cct gaa cca act cca gta 384
 Ser Arg Thr Tyr Val Ala Arg Asn Gly Glu Pro Glu Pro Thr Pro Val
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gtc aat gga gag aag gaa ccc tcc aag ggg gat cca aac aca gaa gag 432
 Val Asn Gly Glu Lys Glu Pro Ser Lys Gly Asp Pro Asn Thr Glu Glu
 130 135 140

atc cgg cag agt gac gag gtc gga gac cga gac cat cga agg sca cag 480
 Ile Arg Gln Ser Asp Glu Val Gly Asp Arg Asp His Arg Arg Pro Gln
 145 150 155 160

gag aag aaa aaa gcc aag ggt ttg ggt aag gag atc acg ttg ctg atg 528
 Glu Lys Lys Lys Ala Lys Gly Leu Gly Lys Glu Ile Thr Leu Leu Met
 165 170 175

cag aca ttg aat act ctg agt acc cca gag gag aag ctg gct gct ctg 576
 Gln Thr Leu Asn Thr Leu Ser Thr Pro Glu Glu Lys Leu Ala Ala Leu
 180 185 190

tgc aag aag tat gct gaa ctg ctg gag gag cac cgg aat tca cag aag 624
 Cys Lys Lys Tyr Ala Glu Leu Leu Glu Glu His Arg Asn Ser Gln Lys
 195 200 205

cag atg aag ctc cta cag aaa aag cag agc cag ctg gtg caa gag aag 672
 Gln Met Lys Leu Leu Gln Lys Lys Gln Ser Gln Leu Val Gln Glu Lys
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 Asp His Leu Arg Gly Glu His Ser Lys Ala Val Leu Ala Arg Ser Lys
 225 230 235 240

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 275 280 285

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 Glu Gln His Asn Glu Arg Asn Ser Lys Leu Arg Gln Glu Asn Met Glu
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ctg gct gag agg ctc aag aag ctg att gag cag tat gag ctg cgc gag 960
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 305 310 315 320

gag cat atc gac aaa gtc ttc aaa cac aag gac cta caa cag cag ctg 1008
 Glu His Ile Asp Lys Val Phe Lys His Lys Asp Leu Gln Gln Gln Leu
 325 330 335

gtg gat gcc aag ctc cag cag gcc cag gag atg cta aag gag gca gaa 1056
 Val Asp Ala Lys Leu Gln Gln Ala Gln Glu Met Leu Lys Glu Ala Glu
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 Glu Arg His Gln Arg Glu Lys Asp Phe Leu Leu Lys Glu Ala Val Glu
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tcc cag agg atg tgt gag ctg atg aag cag caa gag acc cac ctg aag 1152
 Ser Gln Arg Met Cys Glu Leu Met Lys Gln Gln Glu Thr His Leu Lys
 370 375 380

caa cag ctt gcc cta tac aca gag aag ttt gag gag ttc cag aac aca 1200
 Gln Gln Leu Ala Leu Tyr Thr Glu Lys Phe Glu Glu Phe Gln Asn Thr
 385 390 395 400

ctt tcc aaa agc agc gag gta ttc acc aca ttc aag cag gag atg gaa 1248
 Leu Ser Lys Ser Ser Glu Val Phe Thr Thr Phe Lys Gln Glu Met Glu
 405 410 415

aag atg act aag aag atc aag aag ctg gag aaa gaa acc acc atg tac 1296
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gag aaa aca gtc cgg gat aaa gaa ctg gag ggc ctg cag gta aaa atc 1392
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caa cgg ctg gag aag ctg tgc cgg gca ctg cag aca gag cgc aat gac 1440
 Gln Arg Leu Glu Lys Leu Cys Arg Ala Leu Gln Thr Glu Arg Asn Asp
 465 470 475 480

ctg aac aag agg gta cag gac ctg agt gct ggt ggc cag ggc tcc ctc 1488
 Leu Asn Lys Arg Val Gln Asp Leu Ser Ala Gly Gly Gln Gly Ser Leu
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act gac agt ggc cct gag agg agg cca gag ggg cct ggg gct caa gca 1536
 Thr Asp Ser Gly Pro Glu Arg Arg Pro Glu Gly Pro Gly Ala Gln Ala
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ccc agc tcc ccc agg gtc aca gaa gcg cct tgc tac cca gga gca ccg 1584
 Pro Ser Ser Pro Arg Val Thr Glu Ala Pro Cys Tyr Pro Gly Ala Pro
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agg gcc
 Arg Ala
 545 1638

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<211> 550

<212> PRT

<213> Oryctolagus cuniculus

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 Gln Glu Trp Ile Leu Asp Thr Ile Asp Ser Leu Arg Ser Arg Lys Ala
 35 40 45
 Arg Pro Asp Leu Glu Arg Ile Cys Arg Met Val Arg Arg Arg His Gly
 50 55 60
 Pro Glu Pro Glu Arg Thr Arg Ala Glu Leu Glu Lys Leu Ile Gln Gln
 65 70 75 80
 Arg Ala Val Leu Arg Val Ser Tyr Lys Gly Ser Ile Ser Tyr Arg Asn
 85 90 95
 Ala Ala Arg Val Gln Pro Pro Arg Arg Gly Ala Thr Pro Pro Ala Pro
 100 105 110
 Pro Arg Ala Pro Arg Gly Gly Pro Ala Ala Ala Ala Pro Pro Pro
 115 120 125
 Thr Pro Ala Pro Pro Pro Pro Pro Ala Pro Val Ala Ala Ala Ala
 130 135 140
 Pro Ala Arg Ala Pro Arg Ala Ala Ala Ala Ala Ala Thr Ala
 145 150 155 160
 Pro Pro Ser Pro Gly Pro Ala Gln Pro Gly Pro Arg Ala Gln Arg Ala
 165 170 175
 Ala Pro Leu Ala Ala Pro Pro Pro Ala Pro Ala Ala Pro Pro Ala Ala
 180 185 190
 Ala Pro Pro Ala Gly Pro Arg Arg Ala Pro Pro Pro Ala Ala Ala Val
 195 200 205
 Ala Ala Arg Glu Ser Pro Leu Pro Pro Pro Pro Gln Pro Pro Ala Pro
 210 215 220
 Pro Gln Gln Gln Gln Gln Pro Pro Pro Pro Pro Pro Gln Gln Pro
 225 230 235 240
 Gln Pro Pro Pro Glu Gly Gly Ala Ala Arg Ala Gly Gly Pro Ala Arg
 245 250 255
 Pro Val Ser Leu Arg Glu Val Val Arg Tyr Leu Gly Gly Ser Ser Gly
 260 265 270
 Ala Gly Gly Arg Leu Thr Arg Gly Arg Val Gln Gly Leu Leu Glu Glu
 275 280 285
 Glu Ala Ala Ala Arg Gly Arg Leu Glu Arg Thr Arg Leu Gly Ala Leu
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 Ala Leu Pro Arg Gly Asp Arg Pro Gly Arg Ala Pro Pro Ala Ala Ser
 305 310 315 320
 Ala Arg Ala Ala Arg Asn Lys Arg Ala Gly Glu Glu Arg Val Leu Glu
 325 330 335
 Lys Glu Glu Glu Glu Glu Glu Glu Asp Asp Glu Asp Asp Asp
 340 345 350
 Asp Val Val Ser Glu Gly Ser Glu Val Pro Glu Ser Asp Arg Pro Ala
 355 360 365
 Gly Ala Gln His His Gln Leu Asn Gly Gly Glu Arg Gly Pro Gln Thr
 370 375 380
 Ala Lys Glu Arg Ala Lys Glu Trp Ser Leu Cys Gly Pro His Pro Gly
 385 390 395 400
 Gln Glu Glu Gly Arg Gly Pro Ala Ala Gly Ser Gly Thr Arg Gln Val
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<212> DNA
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Ala Arg Pro Asp Leu Glu Arg Ile Cys Arg Met Val Arg Arg Arg His
50 55 60

cag cgc gcc gtg ctc cgg gtc agc tac aag ggg agc atc tcg tac cgc 530
Gln Arg Ala Val Leu Arg Val Ser Tyr Lys Gly Ser Ile Ser Tyr Arg
80 85 90 95

aac gcg gcg cgc gtc cag ccg ccc cgg cgc gga gcc acc ccg ccg gcc 578
Asn Ala Ala Arg Val Gln Pro Pro Arg Arg Gly Ala Thr Pro Pro Ala
100 105 110

ccg ccg cgc gcc ccc cgc ggg ggc ccc gcc gcc gcc gcc gcg ccg ccg Pro Pro Arg Ala Pro Arg Gly Gly Pro Ala Ala Ala Ala Ala Pro Pro 115 120 125	626
ccc acg ccc gcc ccg ccg ccg ccg ccc gcg ccc gtc gcc gcc gcc gcc Pro Thr Pro Ala Pro Pro Pro Pro Pro Ala Pro Val Ala Ala Ala Ala 130 135 140	674
gcc ccg gcc cgg gcg ccc cgc gcg gcc gcc gcc gcc gct gcc gcc aca Ala Pro Ala Arg Ala Pro Arg Ala Ala Ala Ala Ala Ala Ala Thr 145 150 155	722
gcg ccc ccc tcg ccc ggc ccc gcg cag ccg ggc ccc cgc gcg cag ccg Ala Pro Pro Ser Pro Gly Pro Ala Gln Pro Gly Pro Arg Ala Gln Arg 160 165 170 175	770
gcc gcg ccc ctg gcc gcg ccg ccg ccc gcg ccc gcc gct ccc ccg gcg Ala Ala Pro Leu Ala Ala Pro Pro Pro Ala Pro Ala Pro Pro Ala 180 185 190	818
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<211> 12619

<212> DNA

<213> Homo sapiens

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